

the NIH Record

FILE COPY

U. S. DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE

May 18, 1965
Vol. XVII, No. 10

NATIONAL INSTITUTES OF HEALTH
PUBLIC HEALTH SERVICE

House Votes NIH \$1.16 Billion for Fiscal Year '66

The Fiscal 1966 DHEW appropriation bill, as revised by the House Appropriations Committee and passed by the House on May 5, includes \$1.16 billion for NIH, an increase of \$13.4 million over the amount requested by the President.

This includes an increase of \$11.7 million in operating funds and a \$1.7 million increase for direct construction. The total approved for NIH exceeds by \$87 million the amount appropriated for the current fiscal year.

PHS Total \$2 Billion

Funds for NIH are included in the \$2 billion Public Health Service portion of the \$7.4 billion appropriated for the Department. The PHS portion also contains \$6 million for scientific activities overseas (from the Special Foreign Currency Appropriation), most of which will be allocated to NIH.

(See BUDGET, Page 8)

TV Viewers to Take Drivers' Test Monday

To help cut the mounting toll of traffic accidents—to date 1965 is breaking all prior records—the CBS television network (channel 9) will present "The National Drivers' Test" next Monday (May 24) from 10 to 11 p.m. EDT.

This show will permit the participation of all TV viewers. They will see film sequences of real driving situations, both in slow motion and normal speed, including collisions and near-collisions.

Scenes Test Judgment

These scenes, shown from the viewpoint of the person behind the wheel, are designed to test his judgment in collision situations, his knowledge of the rules of the road, and his ability to perceive driving hazards.

All NIH employees will have the official test form, to be distributed tomorrow with accompanying memo by the Plant Safety Branch, for use in recording their answers to the questions posed by the film sequences.

(See TV TEST, Page 2)

Findings Brighten Hope For Trivalent Vaccine Against Adenoviruses

Studies conducted by the National Institute of Allergy and Infectious Diseases in cooperation with the Federal Bureau of Prisons have revealed that the 31 adenoviruses, a "family" responsible for severe respiratory disease in children and military trainees, fall into three antigenic (antibody-producing) groups.

The finding brightens the prospect of eliminating a major disease threat to children. By incorporating three representative strains of adenovirus into a trivalent vaccine, it may be possible to provide broad immunity against a wide variety of adenoviruses.

Volunteers Develop Antibodies

Dr. Julius A. Kasel of the Laboratory of Clinical Investigations, NIAID, reported at a recent meeting of the Association of American Physicians that volunteers experimentally infected with representative strains of adenovirus developed antibodies to other strains within the same antigenic group.

The observation confirms an earlier classification of human adenoviruses based on animal red blood cell reactions reported by Dr. Leon Rosen, also of NIAID.

Co-authors of the paper presented by Dr. Kasel are Drs. P. A. Banks, R. Wigand, V. Knight, and D. W. Alling.

Adenovirus types 1, 2, 3, 5, 6, and 7 are associated with all forms

(See VACCINE, Page 8)

6 Scientists Tour Hemorrhagic Fever Areas in U.S.S.R.

Six American scientists left recently for a month's tour of the Soviet Union to observe medical research facilities there and to confer with Russian scientists on the hemorrhagic fevers found in Russia.



Dr. Shelokov

The visit is sponsored by the Public Health Service under the program in medicine of the co-operative exchange agreement between the United States and the Soviet Union.

The delegation plans to visit four areas in Russia where hemorrhagic fevers exist—Far Eastern Siberia, Central Siberia, Soviet Central Asia, and the Crimea.

Circulation Affected

Hemorrhagic fevers—acute infectious diseases characterized by severe disturbances of the circulatory system—occur in many parts of the world.

During a recent outbreak in Bolivia, up to 20 percent of the patients died. Many of the hemorrhagic fevers are transmitted by insects. Bolivian hemorrhagic fever, however, is apparently carried by rodents and transmitted to man without an insect agent.

Several thousand cases of hemor-

(See SOVIET TOUR, Page 7)

New Method of Studying Wasp Peptides Used in High Blood Pressure Research

By Tony Anastasi

A visiting Japanese scientist who served with the National Heart Institute's Laboratory of Clinical Biochemistry has devised a colorful method of studying wasp peptides which could be beneficial to high blood pressure patients.

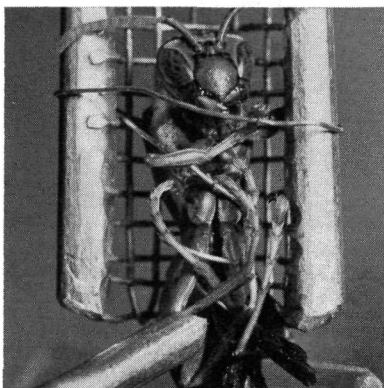
Dr. Zenzo Tamura, now returned to Japan, linked wasp peptides (small protein-like substances) with a fluorescent dye for easier study on a chromatogram plate. In two hours the peptides separate and form a group of colored fluorescent spots.

Separation Simplified

This method enables Dr. Tamura to isolate, detect and measure these peptides, which otherwise are difficult to separate. The peptides were formerly studied by using bioassay methods to determine their potency by noting their effects on animals or isolated animal tissues.

The Institute's Experimental Therapeutics Branch, headed by Dr. Albert Sjoerdsma, is applying

(See WASP PEPTIDES, Page 4)



NHI scientists sting wasps to study their peptides. Fastened to this miniature "electric chair" by wire strands, the wasps are shocked by the electrode (lower left), causing them to emit their venom.

Federal Grant Approved for Retardation Facility

The Fernald State School, Waltham, Mass., a university-affiliated facility for the mentally retarded, has been awarded a Federal construction grant of \$724,725 under provisions of the 1963 Mental Retardation Facilities and Community Mental Health Centers Construction Act, administered by the Public Health Service.

The school is affiliated with Massachusetts General Hospital and associated with a number of educational facilities in the Boston area.

The Federal grant will aid in constructing a Community Evaluation and Rehabilitation Center and a new research center. Total construction costs will be about \$2.6 million.

Fernald State School is the third recipient of a construction grant under the act. Last February grants totaling \$3.9 million were awarded to the Children's Rehabilitation Institute, Reisterstown, Md., an affiliate of Johns Hopkins University Medical Center, Baltimore; and Georgetown University Medical Center, Washington, D.C.

the NIH Record

Published bi-weekly at Bethesda, Md., by the Public Information Section, Office of Research Information, for the information of employees of the National Institutes of Health, principal research center of the Public Health Service, U. S. Department of Health, Education, and Welfare, and circulated by request to interested members of the public. The NIH Record content is reprintable without permission. Pictures are available.

NIH Record Office.....Bldg. 31, Rm. 4B13. Phone: 49-62125

Editor E. Kenneth Stabler
Associate Editor George J. Mannina

Staff Correspondents

Georgiana Brimijoin, NCI; Tony Anastasi, NHI; Jan Etheridge, NIAID; Mary Anne Gates, NIAMD; Bob Callahan, NIDR; Gail Dearing, NIMH; Frances Dearman, NINDB; Elsie Fahrenthold, CC; Faye Peterson, DBS; Linda Jacobson, NIGMS; Beverly Warran, DRFR; Dick Turlington, DRG; Bill Kleven, DRS; Frances Mills, OAM; Dan Rogers, NICHD.

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policy of the paper and the Department of Health, Education, and Welfare.

NEWS from PERSONNEL

MEMORIAL DAY

Because Memorial Day, May 30, falls on a Sunday this year, all full-time employees whose regular workweek is Monday through Friday will have a holiday on Monday, May 31. An employee whose workweek is other than Monday through Friday should consult his supervisor to determine his day off.

INFORMAL RECOGNITION

On April 29 Dr. Shannon accorded two employee organizations "Informal Recognition" for their membership at the National Institutes of Health. The employee organizations are (1) Lodge 1632, Brotherhood of Painters, Decorators and Paperhangers of America, AFL-CIO, and (2) AFL-CIO Truckers, Local Union 3031.

As a result of this form of recognition these employee organizations may present to NIH management their view of matters of concern to their membership.

BULLETIN BOARD NOTICES

In accordance with the NIH policy of nondiscrimination, any notices posted on official bulletin boards concerning the sale or rental of rooms, apartments, and houses must now carry a statement signed by the advertiser that the accommodations are available on an "open-occupancy" basis.

The same principle applies to listings entered in the Housing Registry maintained in the Personnel Management Branch, Building 1, Room 31. It must be clearly understood that the property offered for rent or for sale is available on an open-occupancy basis, with no restrictions involved as to race, color, creed, or national origin.

List of Latest Arrivals Of Visiting Scientists

3/30—Dr. Robert Binks, Great Britain, collaborative research between the Laboratory of Clinical Biochemistry and the Laboratory of Metabolism. Sponsor: Dr. Henry M. Fales, NHI, Bldg. 10, Rm. 7N306.

4/1—Dr. Odd E. Larje, Sweden, research in the Laboratory of Microbiology. Sponsor: Dr. Robert J. Fitzgerald, NIDR, Bldg. 30, Rm. 334.

4/26—Dr. David S. Rowe, England, research in the Immunology Branch. Sponsor: Dr. John L. Fahey, NCI, Bldg. 10, Rm. 4B18.

Health Agencies Employ More Full-Time Nurses

A total of 35,209 nurses were employed full-time by national, State, and local public health agencies—both official and non-official—and by local boards of education in January 1964, according to a report issued recently by the Public Health Service.

The 1964 total represents an increase of 10,000 over 1950, PHS said. Most of the gain occurred in the number of nurses employed by local school boards, which increased their nursing staffs from 6,000 to over 13,000 during this period.

TV TEST

(Continued from Page 1)

Each TV viewer will be able to grade himself in comparison with a scientifically selected sample of the Nation's drivers whose answers will be fed into a computer and reported on the show.

Others who wish to take the test may obtain the forms from their local CBS-TV station or from any Shell service station.



Left to right: Mark J. Lombardi, William C. Reid and Leidy D. Zern of the Gnotobiotics Section, Laboratory of Microbiology, National Institute of Dental Research, are congratulated by Dr. Francis A. Arnold Jr., Institute Director, on receiving sustained superior performance awards for assembly, maintenance and repair of germfree isolators and equipment.—Photo by Ralph Fernandez.

CC Blood Bank Receives 264 Units During April

During April, the Clinical Center Blood Bank reports, 264 units of blood were received from NIH donors. In the same period CC patients received 2,083 units of blood.

The Blood Bank also reports that the following NIH employees recently brought their donations to the gallon mark: Dr. D. T. Chalkley, Grants Administrator, Research Grants Review Branch, DRG; Ernest J. Cheslosly, Motor Pool, Office Services Branch, OD; Frank S. Davis, Physical Science Aide, Laboratory of Neurophysiology, NIMH; Dr. Leonard I. Pearlman, Social Science Analyst, Laboratory of Socio-Environmental Studies, NIMH; Armano Sandoval, Chemist, Laboratory of Metabolism, NHI; and Robert E. Williams, Operating Engineer, Plant Engineering Branch, DRS.



Temple Markoe, an up-to-date member of the NIH Recreation and Welfare Association, knows that the Clinical Center's Patient Welfare Fund receives the profits from empty soft drink bottles returned to the racks. She is helping spread the word because she knows, too, that some 800 cases of empty bottles are not returned each month. Miss Markoe is a secretary for the CC Normal Volunteer Patient Program.—Photo by Jerry Hecht.

Sadesky Goes to NIMH As Exec. Officer; Miller Becomes Financial Head

The Public Health Service has announced the appointment of Billy J. Sadesky, NIH Financial Management Officer, as Executive Officer of the National Institute of Mental Health, and the appointment of Charles Miller, Chief of the Management Policy Branch, to succeed him as Financial Management Officer.

As the Executive Officer of the NIMH, Mr. Sadesky will be responsible for assisting the Direc-



Mr. Miller



Mr. Sadesky

tor in administration of the programs of the Institute.

Mr. Miller's duties as Financial Management Officer entail responsibility, in the central administration of NIH, for budgetary, accounting and auditing procedures.

Since his transfer to NIH in the summer of 1951, Mr. Sadesky has served in various posts within the Institutes and in the Office of the Director. He was previously Head of the Budget Management Section, FMB, and prior to that was on the staff of the Chief of the Bureau of Public Assistance. He served with the U.S. Air Force from 1942 to 1945. Two pre-war years were spent with the Social Security Administration.

A native of San Antonio, Tex., Mr. Sadesky received a degree of Associate in Administration from American University in 1952.

Joins NIH in 1960

Mr. Miller comes to the Financial Management post from the Management Policy Branch, where he served as Chief since he joined NIH in August 1960. Before that he was Assistant to the Assistant Secretary for Administration, Office of the Secretary, DHEW.

Previously he was engaged in management analysis work with the Bureau of Old Age and Survivors Insurance of the Social Security Administration. During World War II he served as a lieutenant in the U.S. Army.

Mr. Miller was one of seven NIH employees to receive DHEW Superior Service Awards in 1964.

Born in Philadelphia, Pa., he was graduated *cum laude* from Princeton University in 1947 and received his M.A. degree in political science from the University of Pennsylvania in 1948.

Dr. Shannon Is Elected To National Academy

Dr. James A. Shannon, Director of NIH, was among 35 new members elected to the National Academy of Sciences at the Academy's annual meeting April 27 in Washington, D. C.



A private, non-profit organization of scientists and engineers, the NAS is devoted to furtherance of science and its use for the general welfare. New members are elected by the current membership in recognition of distinguished contributions to scientific and technical research.

Although NAS is not a part of the U.S. Government, it has enjoyed a close relationship with the Federal Government as an official adviser in matters of science and technology.

The Academy was established on March 3, 1863 by an Act of Incorporation passed by Congress and signed by President Lincoln.

Provisions Cited

It was empowered to "make its own organization, including its constitution, bylaws, and rules and regulations; to fill all vacancies created by death, resignation, or otherwise; to provide for the election of foreign and domestic members, the division into classes, and all other matters needful or usual in such institution, and to report the same to Congress."

Other NIH scientists who are members of the Academy are Drs. Christian B. Anfinsen, Chief, Laboratory of Chemical Biology, NIAMD; Charles Armstrong, of the Virology Research Resources Branch, NCI; Kenneth S. Cole, Chief, Laboratory of Biophysics, NINDB; Robert J. Huebner, Chief, Laboratory of Infectious Diseases, NIAID; and Seymour S. Kety, Chief, Laboratory of Clinical Science, NIMH.

Dr. Wollman to Lecture At Conference in Rome

Dr. Seymour Wollman, Head of the Cancer Physiology Section, Laboratory of Physiology, National Cancer Institute, has been invited by the program committee of the 5th International Thyroid Conference to give the British-sponsored Dunhill Lecture at the conference in Rome, Italy, May 24-27.

Dr. Wollman's paper, "Heterogeneity of the Thyroid Gland," summarizes recent work he has done with collaborators at NIH on thyroid hormone synthesis and secretion. The lecture will be published in the proceedings of the conference.

Printing Management Program at NIH Rated 'Superior' in Department Survey



This partial view of the main printing plant in Building 31 gives some idea of the scope of this activity at NIH. In the foreground are two of the three automated presses among the equipment added since 1963.—Photo by Jerry Hecht.

By Martha Kovacic

The staff of the NIH Printing and Reproduction Section, Office Services Branch, was commended recently by DHEW's Division of General Services for "the manner in which they are administering their phase of the over-all printing management program of the Department."

Dr. Nadel, NCI, Selected Guest Editor of Journal

Dr. Eli M. Nadel, Chief of the Diagnostic Research Branch of the National Cancer Institute, was selected as guest editor for two issues of *Acta Cytologica*, *The Journal of Exfoliative Cytology*.

Under his editorship both the January-February and the March-April issues of the *Journal* have been devoted to a Symposium on Tumor Cells in the Peripheral Blood.

Termed Diagnostic Aid

As Dr. Nadel points out in his preface to Part I of the symposium, released last February, the application of exfoliative cytology has proved a rewarding and dependable diagnostic aid in detecting cancer of accessible sites such as mouth, lung, stomach, urinary tract, and uterus.

The possibility that tumor diagnosis through cytological examination of the circulatory blood for cancer cells may be made at an earlier stage has aroused interest among researchers.

Other NIH scientists contributing to Part I of the symposium are Dr. Richard A. Malmgren, Dr. Elizabeth Chu, and Dr. John T. West, all of NCI, and Fred Ederer, of the Heart Institute.

Infant mortality is about one-fifth of the 1910 level. In 1962, about 425,000 babies lived to their first birthdays who would not have lived if the mortality rates of 1910 were still in effect, the Census Bureau reports.

Dale S. Thompson, Director of the Division, noted in a memorandum transmitting the report of a Departmental survey made in January that "the NIH printing management program is deemed to be superior in nature."



Mr. Caponiti Kenneth Revell, Chief of the Division of Administrative Services, PHS, also reported, "The results of the survey indicate the high level of technical and managerial competency that exists at NIH in the printing management area."

Caponiti Heads Section

Heading the Printing and Reproduction Section, Fred Caponiti is responsible for administering the complex printing program which has expanded rapidly to meet the needs of NIH.

He is assisted in this by Raymond E. Walls, Reproduction Unit Head, and William C. Atlee, Acting Head of the Printing Unit. Mr. Walls supervises the printing of all material in the main plant in Building 31 and in the plant at the Westwood Building. Mr. Atlee and his staff handle all material sent to the Government Printing Office and other outside sources for printing.

Comparison of the number of requisitions handled by the Printing Unit in Fiscal 1962 and 1964 shows the great increase in material.

(See NIH PRINTING, Page 6)

Study Reports Effective Combination Therapy for Acute Adult Leukemia

Results of a National Cancer Institute clinical study indicate that known anticancer drugs administered in combination to adults with acute leukemia can produce complete remissions for long periods in a majority of patients.

Adults with acute myelocytic leukemia (AML) and acute lymphocytic leukemia (ALL) have generally been resistant to treatment. The current investigation was suggested by the success of intensive combination chemotherapy in children with acute leukemia.

Twenty-four patients received methotrexate, 6-mercaptopurine, prednisone, and vincristine, in combination, in a series of 5-day courses alternating with recovery periods of 7 to 10 days.

Those achieving complete remission were then continued on monthly 5-day courses of prednisone, methotrexate, and 6-mercaptopurine.

Eleven of 16 AML patients achieved complete remissions, and two had partial remissions. All eight patients with ALL achieved complete remission, but one died of septicemia shortly after remission.

Remissions Compared

The median period to remission was 30 days and three courses of therapy for patients with AML, and 23 days and two courses of therapy for those with ALL.

The median duration of remission for patients with AML was eight months, with seven patients still in remission at the time of reporting. For patients with ALL, the median duration was in excess of nine months, with six patients still in remission. Median duration of survival of such patients given conventional treatment is usually only two to three months.

Bone marrow depression, the only significant toxicity observed, was successfully treated with platelet transfusions and was not considered cause for modifying treatment.

Drs. Myron Karon, Emil Freireich, and Paul Carbone, of the Medicine Branch, NCI, reported their findings to the 56th annual meeting of the American Association for Cancer Research.

Dental Society Honors Dr. Kenneth Potter

Dr. Kenneth C. Potter, Chief of the Training Section, Extramural Programs Branch, National Institute of Dental Research, was awarded membership in Omicron Kappa Upsilon Honorary Dental Society Chapter at St. Louis University School of Dentistry, St. Louis, Mo., May 6.

WASP PEPTIDES

(Continued from Page 1)

this procedure to research in high blood pressure. Dr. Harry Keiser of this branch is trying to determine whether peptides are involved in high blood pressure and, if so, which ones are elevated in this disorder.

Since some peptides are hormones that regulate many of the human body's biological functions, these studies may also reveal how the body controls certain of these functions.

Thus far this research work has uncovered a number of peptide-like substances contained in wasp venom. Substances similar to bradykinin and kallidin have been detected in previous NHI studies.

Despite wide gaps in knowledge concerning bradykinin, animal ex-



In the more recent study Dr. Tamura examines the wasp peptides on a chromatogram plate. The peptides, linked with a fluorescent dye, separate after about two hours to form a group of colored fluorescent spots.

perimentation results indicate that the substance may hold the key to the solution of a variety of puzzling physiologic problems.

Bradykinin is known to have five principal activities: stimulating (slow type) smooth muscle, producing vasodilation, increasing capillary permeability, causing migration of leukocytes, and stimulating pain fibers.

Functions Discussed

Although it hasn't been proven that bradykinin functions throughout the body as the local regulator of blood flow, there is little doubt that it regulates blood flow at least in the salivary and sweat glands.

Although NHI scientists are interested primarily in studying the venom for its possibilities in heart research, other scientists in the U.S. are concerned with reducing the number of fatalities caused by the wasp and venomous animals.

Studies have shown that Hy-

Automated Television Computer-Scanner To Identify Bacteria, Infectious Agents

A novel automated "television-computer" machine for identifying bacteria, viruses, and other infectious agents and for studying their properties and requirements will be constructed at the University of California, Berkeley, with funds from the Public Health Service.

A 5-year program is planned, at an estimated total Federal cost of \$1.24 million, with a first-year grant of \$629,038. The grant supporting the project will be administered by the National Institute of General Medical Sciences.

The main purpose of the program will be to make an intensive study of the hereditary characteristics of bacteria and other microorganisms. The study will aim to find out what minerals, vitamins, and foods they need to survive; what drugs, poisons, and other agents they are able to resist; and their behavior at high and low temperatures, under various lighting conditions, and under exposure to a variety of environments.

Studies Provide Clues

Results of these studies may provide important clues as to how these smallest of all living creatures function and how they evolved into their modern forms.

The automated system, which will include a high-speed electronic scanner-computer, may enable physicians to diagnose bacterial and other microbial diseases in one-third to one-fourth of the time now required. This could save many lives now lost because of delays in beginning specific drug treatment pending diagnosis.

The program, proposed by Dr. Donald A. Glaser, Professor of Physics and Molecular Biology at the university, will be under his immediate direction. The objective

menoptera insects (wasps, bees, yellow jackets, hornets and ants) kill more people in the United States than any other venomous animal, including rattlesnakes.

There were 460 fatalities from venomous animals in this country during the 10-year period, 1950 through 1959.

Of the 460, Hymenoptera insects caused 229 (50 percent) of these deaths. Poisonous snakes killed 138 (30 percent), and poisonous spiders killed 65 (14 percent).

Dr. Tamura and Dr. John J. Pisano, also of the Laboratory of Clinical Biochemistry, who began studying wasp venom nearly two years ago, presented a scientific paper on the subject at the Federation of American Societies for Experimental Biology meeting in Atlantic City recently.

Thus far, more than 6,000 wasps have been used in the project. This work may some day result in benefits derived from the venom of the wasp, whose sting has often proved fatal to man.

of Dr. Glaser's program is to construct a high-speed electronic scanner-computer for automatic "visual" observation and analysis of medical specimens and biological systems.

This "television-computer" combination, he said, hopefully will make it possible for a research laboratory or a hospital to incubate a specimen for only 12 to 18 hours before identifying and counting the numbers of bacteria of each known kind contained in the specimen. This now usually takes about 48 hours.

Scanner Speeds Process

The time reduction could be accomplished by noting the colony structure, rate of growth on various nutrients, and other characteristics by means of the scanner, which will be able to make determinations with high precision and great speed even on very small colonies.

"Once this identification has been made," Dr. Glaser pointed out, "the computer can direct the automatic petri dish machine to spray penicillin and a variety of other drugs on the growing microbial colonies in order to determine the drug sensitivities of possible disease-causing organisms which are found."

With this automatic system, it is believed that identification of the causative organism and determination of its drug sensitivity or resistance can be made much faster and with higher reliability than is possible with present hospital techniques.

It is expected that essentially the same techniques will be useful for monitoring levels of contamination of food, water, and medical supplies where it is important to know how many living organisms are present and of what kinds.

Scientists Isolate Virus From Germfree Animals

Recent findings indicate that germfree animals, which play a highly significant role in research, are not necessarily free of viruses.

The findings were made by investigators of the National Institute of Dental Research using both germfree and conventional rats screened for the presence of viral agents by inoculating various standard mammalian cell cultures with centrifuged, filtered triturations of the animals' submaxillary glands.

Although no cytopathic effect was observed during successive passages of this agent in cell cultures of rat tissues, the agent did produce a cytopathic effect through a number of passages in rabbit kidney cells, cultures of human skin, and HeLa (human cancer) cell cultures.

The investigators explained that the effect was due to a specific cytopathogen since it was inhibited by specific rabbit antiserum as well as by the serum of gnotobiotic and conventional rats, which apparently harbor the virus without disease.

Inhibition Removed

However, there was no inhibition when inocula containing the agent were reacted with rabbit anti-cell control serum and normal rabbit serum.

No bacteria could be demonstrated by direct culture of the infected gland triturations and the infected cell supernates. Both direct culture and biochemical assay demonstrated that the agent in these inocula was not a mycoplasma.

In addition to showing that the agent fulfilled the criteria for a virus, the investigators demonstrated that it is distinct from the known cytomegaloviruses.

This research was reported at the 65th annual meeting of the American Society for Microbiology in Atlantic City by Warren K. Ashe, Dr. Henry W. Scherp and Dr. Robert J. Fitzgerald, of the Laboratory of Microbiology, NIDR.

Institutes Co-Sponsor Workshop on Cycad Toxicity

Approximately 50 scientists participated in the Fourth Conference on Cycad Toxicity held recently at NIH under the co-sponsorship of the National Cancer Institute, the National Institute of Neurological Diseases and Blindness, and the National Institute of Arthritis and Metabolic Diseases.

The purpose of the one-day meeting was to report on progress in the field during the last year, especially the synthesis of a toxic component (methylazoxymethanol) which is proving to be a useful research tool.

The participants—including bio-

chemists, veterinarians, neurologists, radiobiologists, and pathologists—discussed scientific communications from England, Australia, Papua, Japan, and Germany, in addition to presentations by U.S. scientists.

One aspect of the workshop was concerned with carcinogenesis; another topic focused on analyses of cycads for neurotoxins. The group viewed a documentary film showing cattle from the Dominican Republic with "derrienge," an incurable hind-quarter lameness in these animals. This condition reportedly follows ingestion of cycad leaves.

Heart Contraction Found Related to Potassium Change

Alterations in the vigor of heart-muscle contraction appear to be intimately associated with gains or losses of potassium by the heart, according to Dr. Stanley J. Sarnoff and colleagues of the National Heart Institute's Laboratory of Cardiovascular Physiology.

Their studies indicate that increased cardiac contractility is usually associated with a loss of potassium from heart muscle and decreased contractility with potassium uptake. There appeared to be a direct relationship between the amounts of potassium lost or gained and the observed increases or decreases in contractility.

Heart Adjusts Output

The heart is a variable pump whose output can be adjusted to meet the circulatory requirements of the moment. Basically, its output is modified in only two ways: by increasing heart rate and/or by increasing its stroke volume; that is, the amount of blood ejected with each beat.

However, controlling these two variables are a number of complex mechanisms operating over diverse pathways; and heart performance at any given moment may be the result of a variety of neural and hormonal influences.

Because of the diversity of this control system, heart performance can exhibit remarkable adaptability on the one hand, remarkable stability on the other. Earlier studies by Dr. Sarnoff and co-workers had shown that the heart is also capable of a remarkable degree of autoregulation.

When completely cut off from



Ada B. Murphy completes her work as medical technician in the Microbiology Service of the Clinical Center's Clinical Pathology Department. She is retiring after 34 years of Federal service. Before joining NIH in 1954, Miss Murphy was a Record Methods Analyst with the PHS Division of Tuberculosis Control, training State and County health personnel. At NIH she organized the Tuberculosis Laboratory and was its first permanent technician.—Photo by Ed Hubbard.

neural or hormonal mechanisms that ordinarily help to control its performance, the heart can still adjust the vigor of its contractions so as to maintain a steady output, even when forced to pump against a higher resistance or when changes in heart rate are imposed by external pacing.

In the course of these studies, the NHI scientists noted that these autoregulatory adjustments in heart contractility were accompanied by net changes in myocardial potassium balance. In general, increased contractility was accompanied by potassium loss, decreased contractility with potassium gain by heart muscle.

Interventions Studied

In the current studies, Dr. Sarnoff and co-workers investigated the effects on heart potassium balance and oxygen consumption of a number of interventions known to alter cardiac contractility.

These included infusions of various heart stimulants or depressants and three hemodynamic alterations known to increase contractility: 1) forcing the heart to pump against a higher resistance (by increasing aortic pressure); 2) pacing the heart at a higher rate; and 3) coupled pacing.

With two exceptions, procedures that increased cardiac contractility also resulted in potassium losses by heart muscle. For example, acetyl strophanthidin, a digitalis-like cardiac stimulant, substantially increased the vigor of ventricular contraction.

This was accompanied by an efflux of potassium from the heart in amounts proportional both to the dosage of the drug used and to the intensity of the cardiac response.

Conversely, the depressed con-

Researchers Report Successful Implants Of Plastic Teeth in Group of Primates

Successful implants of plastic (polymethylmethacrylate) teeth in a group of primates were reported recently by three investigators. The implants were accepted biologically without antibiotics, they reported, and were esthetically effective.

The scientists, supported by the National Institute of Dental Research, removed the animal's tooth and constructed a replica by preparing a mold of the natural tooth and heat processing polymethylmethacrylate which was packed into the mold. The plastic tooth was treated with an antiseptic and then inserted into the animal's natural alveolar socket.

The teeth can be fixed by any method which seems appropriate to the animal's dentition. An intra-coronal technique which utilizes a splint to keep the implant in place was used on seven monkeys and five baboons.

Second Method Described

A second method, tested in one monkey and three baboons, employs an intrabony pinning technique, which renders the tooth self-supporting.

After as long as 37½ months, the investigators found that the transplants were tolerated well by the periodontal tissues. The tissues revealed no roentgenographic evidence of bone resorption or periodontal lesions, and normal perio-

dontal membranes formed about the implant root.

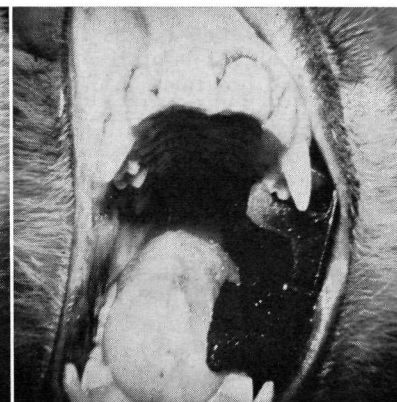
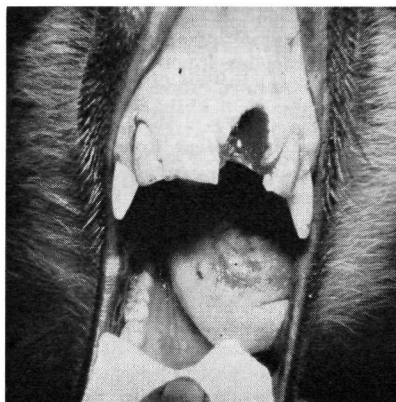
The implant withstood masticatory stresses and became integrated into its environment. Reasonably normal function was assumed by the implant even when unsupported by external fixation to adjacent teeth.

Esthetically Effective

In addition, the plastic tooth was esthetically effective because color, size, and shape could be readily modified.

The investigators pointed out that the plastic tooth implant and the pin, being composed of inorganic matter, do not initiate immunologic reactions characteristic of the homo- and the heterotransplant. In addition, this type of implant is nonresorbable.

These research findings were reported in the *Journal of the American Dental Association* by Drs. Milton Hodosh and Morris Povar, Brown University Institute for Health Sciences, and Dr. Gerald Shklar, Tufts University School of Dental Medicine, Department of Oral Pathology.



The picture at left shows the tooth socket of Gelada baboon from which the maxillary left central incisor has been extracted. Photo at right shows maxillary left central incisor implant, newly placed into the alveolar socket.

tractility following infusions of quinidine sulfate or potassium chloride was accompanied by an influx of potassium.

The two exceptions were calcium and norepinephrine, both cardiac stimulants. Both agents also produced potassium fluxes proportional to the observed increases in contractility. The augmented contractility was accompanied by potassium uptake.

Another significant finding was that the augmentation of cardiac contractility by hemodynamic interventions (increasing heart rate, increasing aortic pressure, and coupled pacing) was accompanied by increases in heart oxygen consumption that were proportional to the

observed losses of potassium.

In contrast, none of the drugs used in this study had any effect on heart oxygen consumption, regardless of their effects on potassium fluxes and cardiac contractility.

Associated with Dr. Sarnoff in the current studies were Drs. Robert H. McDonald Jr., Peter B. Mansfield, Myron L. Weisfeldt, Joseph P. Gilmore, and Willard Daggett. Drs. Weisfeldt and Daggett are no longer with NHI.

The first U.S. woman doctor of medicine, Elizabeth Blackwell, graduated from Geneva Medical College of Western New York in 1849. —Information Please Almanac.



Mrs. John G. Bieri accepts the 1965 Mead-Johnson Award of the American Institute of Nutrition for her husband, Dr. Bieri of NIAMD, whose illness prevented his attending the ceremony at the recent Federation meetings in Atlantic City. The award, including a \$1,000 honorarium, is given annually to an outstanding young scientist. With Mrs. Bieri are Dr. R. W. Engel, President of the Nutrition Society (left) and Dr. Alfred E. Harper of MIT.

NIH PRINTING

(Continued from Page 3)

rial printed by the Government Printing Office or under contract through GPO.

In FY 1964, 1,014 requisitions were issued, an increase of 60 percent over 1962's 633 requisitions. The cost of printing requested was \$939,824 in 1964, a 66 percent increase over the \$566,928 in 1962.

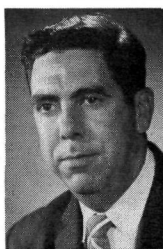
Since 1962 the Printing Unit has added the following services:

- Administration of the GPO deposit account used for purchase of items on sale by the Superintendent of Documents.

- Administration of GPO contracts for procurement of hot-met-



Mr. Walls



Mr. Atlee

al composition for jobs to be reproduced in the NIH plant.

- Maintenance of a central control desk where all NIH requisitions for printing are received, reviewed, and directed to appropriate production sources.

In addition, the Printing and Reproduction Section in 1963 established a mail list information unit to assist all programs on distribution and mail list matters and to review requests for the establishment of new mailing lists.

The section has just completed setting up a publications bulk storage and distribution activity. All NIH publications formerly bulk-stored at the PHS Hospital in Lexington, Ky., have been transferred to Bethesda, and more timely and economical bulk distribution service is expected to result.

Equipment Added

The printing plant's quarters in the A wing basement level of Building 31 were expanded and remodeled in 1962 to meet the printing requirements of NIH. Since January 1963, equipment has been added to more efficiently meet the increased demand for printing services.

These include an Itek Platemaster which makes offset masters direct from originals, eliminating the need for an intermediate negative; three automated presses which print both sides of the paper in one pass through the press; one new offset press and one transferred from the Medical Records Section; one collator, a Listomatic camera, automatic addressing equipment, and machine shop repair equipment.

A second plant was established in the Westwood Building in 1963

Teacher Aide Experience Helps Junior High Girls Develop Insights, Skills

Striking insights into child behavior and their own family relationships have been observed in a group of 10 adolescent girls from Hine Junior High School who spend one morning a week as teacher aides at the Friendship House Nursery School, a settlement house, in Washington, D.C.

From Large Families

Astute comments from the girls come out in a discussion period that follows each session.

Their home environment—large families with low incomes—often prevents them from being objective in their attitudes toward other members of the family and seeing the family as a unit.

At the school they are guided in making objective observations and are encouraged to relate these observations to their home situations. One girl commented, "These discussions have helped me. I'm beginning to understand my family better."

The training is designed to increase the pool of sub-professional manpower devoted to helping pre-school children. Specifically, it will enable these girls to work as nursery aides in summer jobs, and ultimately, as teacher assistants in public school pre-school programs now being developed in Washington and elsewhere under the Poverty Program.

Prepares for Parent Role

Another goal of the project is to prepare these junior high school students for the role of parent by increasing their knowledge and understanding of the very young child.

This project, sponsored by the National Institute of Mental Health, is characteristic of the current trends both in preventive activities in mental health for the pre-school child and in training adolescents to serve their communities in useful roles as aides to professionals.

to provide the extramural programs with more timely service. This plant now has four offset presses, two collators, a plate maker and a paper drill.

The printing management survey report made only a few recommendations for possible improvement. One was that a study be made of the feasibility of producing reprints of articles from professional journals in NIH's own printing plant, since the amount spent for purchase of reprints in Fiscal 1964 (\$120,728) appeared to be in excess of what it would cost to reproduce the reprints within Government.

White, Marshall Named Employment Officers

Dr. Julius White, Chief of the Laboratory of Physiology, NCI, and Dr. Louise H. Marshall, Research Physiologist, NIAMD, have been appointed to succeed Dr. Walter Newton as NIH Deputy Employment Policy Officer and Dr. David Johnson as Associate Deputy Employment Policy Officer, respectively.

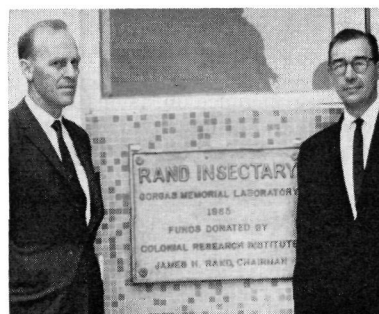
In these positions the appointees serve on a voluntary basis, without remuneration, in addition to their official duties. This service is regarded by the Personnel Management Branch as a valuable contribution to the NIH.

Responsibilities Listed

Under the direction of the Employment Policy Officer, HEW, Drs. White and Marshall are responsible for carrying out the policy of non-discrimination because of race, color, religion, sex, or national origin with respect to civil service personnel matters. They are available to investigate and process complaints of alleged discrimination and to make recommendations for such corrective measures as may be necessary.

Drs. White and Marshall will assume responsibility for carrying out the wishes of Dr. James A. Shannon, Director of NIH, as reflected in his message to the NIH Staff on March 16, when he said:

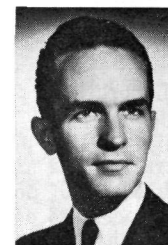
"Since it is in the nature of our work that we be concerned with people, it is my wish that every person who is responsible for the selection, promotion, training or disciplining of personnel give thought to what he can do within the scope of his influence to foster an atmosphere in which the concept and practice of equal opportunity for all will flourish."



Dr. Martin Young (right), Director of the Gorgas Memorial Laboratory in Panama City, which receives most of its support from the National Institute of Allergy and Infectious Diseases, is pictured with Dr. Earl Chamberlayne, NIAID representative at the dedication of the Rand Insectary at the Laboratory. The new building, patterned after the Institute's Rocky Mountain Laboratory insectary, is the gift of James H. Rand of the Sperry Rand Corp.

Frank Smith, Assistant CC Information Officer, Dies in Auto Accident

Frank Smith, 29, Assistant Information Officer of the Clinical Center since July 1964, died instantly in an automobile accident south of Hyattstown, Md., on May 1.



Mr. Smith

As Assistant Information Officer, his duties at the Clinical Center brought him into close contact with all the broad areas of clinical study conducted there. He collaborated in the development and maintenance of an integrated program of public relations, information, health education and related problems concerned with CC patient-care activities.

Was Record Correspondent

Mr. Smith also served as staff correspondent for the *NIH Record*, initiating and contributing news and feature stories concerning research and patient activities of the Clinical Center. Many of these were picked up and printed in other publications. He was particularly interested in programs affecting patients at the Clinical Center.

Shortly before his death, he was appointed to the Welfare Committee of the Recreation and Welfare Association of NIH by the association's President, Richard Henschel, and had outlined a comprehensive long-range plan for organizing and promoting the committee's future activities.

Mr. Smith entered Government service in 1961 and held public information positions in the Office of the Secretary, Department of Health, Education and Welfare, and the Children's Bureau before joining the CC Information Office.

Education Cited

Born and reared in Washington, Mr. Smith graduated from St. Charles College in Catonsville, Md., before attending St. Mary's Seminary in Baltimore from which he received his A.B. in 1957 and S.T.B. in 1959.

He also did graduate work at Catholic University, Washington, D.C., where he earned a Certificate in Public Speaking in 1960.

Friends at NIH provided a floral tribute and contributed to the NIH Patient Welfare Fund in Frank's memory.

In addition to his mother, Mrs. Mary G. Myers, of 6611 23rd Place, Hyattsville, Md., Mr. Smith is survived by four brothers and three sisters.

NIMH to Support Study Of Steroids' Influence On Brain, Behavior

The influence of steroids—hormones secreted by the adrenal cortex and sex glands—on the brain and behavior will be studied at the Stanford University School of Medicine under a Public Health Service grant, announced recently by Surgeon General Luther L. Terry.

The university will receive \$142,730 in direct costs for the first year plus additional support totaling \$789,499 for six years from the National Institute of Mental Health.

The study will focus initially on the female sex hormone, progesterone. Dr. David Hamburg, Professor and Executive Head of the Department of Psychiatry at Stanford, will head a team of psychiatrists, biochemists, psychologists, and physiologists.

To Study Hormone Role

They will study the role that progesterone and the corticosteroids (hormones secreted by the outer area or cortex of the adrenal glands) may play in causing the emotional distresses of the menstrual cycle, pregnancy, and the postpartum period.

Recent research suggests many close links between the steroids, brain and behavior. Dr. Hamburg and other scientists have found that marked changes in steroid hormone production often coincide with emotional disturbance.

For example, they found increased concentrations of corticosteroids in hypervigilant or emotionally over-responsive persons.

Other studies have shown that the body's level of progesterone decreases during premenstrual and post-pregnancy periods. These decreases may be related to emotional disorders of these periods which have ranged from premenstrual tension and depression to psychiatric hospital admissions, crimes



Pictured with E. Arline Heath, Chief of the CC Psychiatric Nursing Service (fourth from left), are eight of the 16 members of the Service who received superior performance awards. From left: Calvin Green, Theoloman Ricks, Barbara Powell, Miss Heath, Ethel Habel, Charlotte Hall, Margaret Post, Frances Benninghoven and Allen Walker. Not present for the picture were Catherine Briggs, Ruby Collins, James Prather, Raymond Rusten, Edna Whitehead, Anne Kunkle, Donald Preston and Carl Groves.—Photo by Ed Hubbard.

of violence, and suicide attempts.

Dr. Hamburg plans a detailed study of the influence of different levels of progesterone on the brain and its consequent effects on normal and abnormal behavior.

Wives of married students at Stanford will be subjects in studies focusing on the menstrual cycle and the first pregnancy. The studies are designed to answer such questions as:

Questions Listed

- How do decreases in progesterone affect premenstrual tension in different women, and what effects do sharp drops in progesterone have following pregnancy?
- What is the relationship between hormone level changes and varying degrees of anxiety and depression in pregnant women?
- What pathways do progesterone and the corticosteroids travel in the body, and how does the body dispose of their metabolites (chemical byproducts)?
- How do progesterone and its metabolites affect the electrical activity of the brain and the central nervous system?

Dr. Johnson, who contracted the disease during his research, led the team that stopped an epidemic in San Joaquin, Bolivia, in 1964. For this achievement the Bolivian Government awarded one of its highest decorations, the Order of the Condor, to Dr. Johnson and four other NIAID scientists.

Dr. Johnson is presently Director of the NIAID Middle America Research Unit in the Canal Zone. Dr. Wiebenga is Chief of NIAID's Laboratory of Tropical Virology.

Other members of the delegation are Dr. Jordi Casals, Rockefeller Virus Laboratory, Yale University, New Haven, Conn., and Dr. Harry Hoogstraal, Head of the Department of Medical Zoology, U.S. Naval Medical Research Unit No. 3, Cairo, Egypt.

SOVIET TOUR

(Continued from Page 1)

rhagic fever occurred among United Nations troops during the Korean War.

Chairman of the delegation is Dr. Alexis Shelokov, Chief of the Laboratory of Virology and Rickettsiology, Division of Biologics Standards. Dr. Telford Work, Chief of the Virology Section, Communicable Disease Center, Atlanta, Ga., is co-chairman.

Two other members of the delegation, Drs. Ned Wiebenga and Karl Johnson, of the National Institute of Allergy and Infectious Diseases, have been investigating Bolivian hemorrhagic fever since 1962.

16 of CC's Psychiatric Nursing Service Receive \$1280 in Cash Awards

Dr. Jack Masur, Director of the Clinical Center, recently presented cash awards totaling \$1,280 to 16 members of the CC's Psychiatric Nursing Service for "excellent performance at both clinical and research tasks in a project which began in February 1961 and still continues."

Dr. William E. Bunney Jr., Ward Administrator, of the National Institute of Mental Health, said:

"For over three years, our nursing staff has given superior care to patients, many of whom are exceedingly difficult and whose needs are often critical. While caring for patients, this staff also helped in devising a rating scale for collecting observational data.

Others Adopt Scale

"Using this scale—which has since been adopted by a number of other research units in the country—this nursing staff has exercised fine discrimination in making skilled clinical observations which reliably correlate with clinical judgments made by psychiatrists."

Mrs. Ethel Habel, Head Nurse for the unit, had the major responsibility for training and supervising the staff.

Anthony Burkley, who resigned from the Psychiatric Nursing Service to join the Army, received a special letter of commendation.

6th Cardiac Symposium Scheduled Here May 27

The sixth annual Cardiac Symposium, sponsored by the Medical Advisory Committee of the Montgomery County Tuberculosis and Heart Association, will be held in the NIH Clinical Center auditorium May 27 from 9 a.m. to 4:45 p.m. Physicians from the Metropolitan Washington Area are invited to attend the symposium.

NIH participants in the day-long program are: Dr. Eugene Braunwald, Chief of the National Heart Institute's Cardiology Branch; Dr. Donald S. Frederickson, NHI Clinical Director; and Dr. Louis Sokoloff, of the Laboratory of Clinical Science, National Institute of Mental Health. Dr. Ralph E. Knutti, NHI Director, will open the symposium.

Subjects Presented

Subjects to be presented include "Differential Diagnosis of Hypertension," "Indications, Contra-Indications and Complications of Cardioversion," "Lipid and Cholesterol Metabolism," and "How to Perform and Interpret the Electrocardiographic Exercise Test."

In addition, two panel discussions will be held on the subjects of "Diagnosis and Management of Cerebral Vascular Accidents" and "Pre-Operative Evaluation of Your Patient."

In conjunction with the symposium, the NIH Combined Staff Clinical Conference conducted by NHI staff also will be held May 27 from 8:30 p.m. to 10:30 p.m. in the CC auditorium. Dr. Braunwald will moderate the evening program on "Recent Developments in the Physiology of Congestive Heart Failure."

There is no registration fee for either program.



Dr. Kenneth M. Endicott, Director of the National Cancer Institute, examines with Norma Golumbic, Head of the Research and Program Reports Section of NCI, Volume II of the Report of the President's Commission on Heart Disease, Cancer and Stroke, which contained her award-winning summary of 30 essays prepared by cancer specialists. The superior performance award, consisting of a certificate in recognition of her "special service in the public interest" and \$300, was presented by Dr. Endicott at a ceremony on May 3. Mrs. Golumbic has been a science writer for 15 years, the last nine and a half at NCI.—Photo by Ralph Fernandez.

NIAID Scientists Infect Adult Volunteers With ECHO Virus, Type 25

National Institute of Allergy and Infectious Diseases scientists have infected adult volunteers with ECHO virus, type 25, which has been recovered from children with various illnesses, but its relationship to disease in adults is uncertain.

Neutralizing antibody, however, has frequently been found in adults. A high incidence of adult infection with this serotype has therefore been considered probable.

The NIAID research team studied the adult response to ECHO virus, type 25, in 11 prisoner volunteers at the Clinical Center. Eight of the volunteers were antibody negative; three were antibody positive.

The volunteers were inoculated with a strain serologically related to the prototype strain isolated by scientists of NIAID's Laboratory of Infectious Diseases.

Half of the antibody-negative volunteers developed respiratory illness characterized by pharyngitis and cervical adenitis; three of them had low-grade fever.

Results Noted

The results suggest that ECHO virus, type 25, can cause respiratory disease in adults. Half of the antibody-negative volunteers did not become ill, but virus was isolated from them.

The antibody-positive volunteers also did not become ill, but virus was isolated from two of them and one developed a four-fold rise in antibody titer. ECHO virus, type 25, may therefore produce apparent illness irregularly.

The investigators—Drs. Julius A. Kasel, Leon Rosen, Frank Loda (now at Duke University), and William Fleet (now at Vanderbilt University)—stress that their findings do not exclude the possibility that ECHO virus, type 25, may be responsible for other clinical syndromes more severe than those occurring in the volunteers. Their report appeared in the Proceedings of the Society for Experimental Biology and Medicine.

VACCINE

(Continued from Page 1)

of acute respiratory disease in children. An estimated 15-20 percent of cases of severe pneumonia in hospitalized children are caused by adenoviruses.

Another dread disease in children, pharyngoconjunctival fever, is due to adenovirus infection. Two other strains, types 8 and 11, are responsible for serious epidemics of keratoconjunctivitis, or "shipyard eye."



Winners of the 7th Annual NIH Art Exhibit, sponsored by the Recreation and Welfare Association of NIH, are presented equal cash prizes totaling \$300 by H. B. Hopkins and Dick Henschel, R&W General Manager and President, respectively, at ceremonies held May 3 in the Clinical Center lobby. They are (from left): Sadie Fishman (NIMH); Mr. Hopkins; Sandra Levine, wife of Dr. Jerome Levine (NIMH); Naomi Bossom, wife of Dr. Joseph Bossom (NIMH); Marcella Giberman (NIMH), who accepted the award for her daughter, Katherine; Phyllis Hoffman, wife of Dr. Harold Hoffman (NCI); Jenny Lea Knight (NIMH); Ann Zahn, wife of Theodore Zahn (NIMH); Dr. J. Arthur Weinberg (NIMH); and Mr. Henschel.—Photo by Ralph Fernandez.

BUDGET

(Continued from Page 1)

The House-approved DHEW appropriation does not include almost \$2 billion proposed in separate legislation for new educational and other programs.

The \$1.16 billion approved for NIH provides for \$1,052 million in operating funds. Increases voted over the \$1,040 million recommended in the President's budget are provided for General Research and Services, from \$58.7 to \$60 million (for additional funds for Computer Research and Technology); and National Cancer Institute, from \$150 to \$153.6 million.

Also, National Heart Institute, from \$131.6 to \$136.4 million; and National Institute of Arthritis and Metabolic Diseases, from \$119.2 to \$121.2 million.

No Other I/D Changes

No changes were made in the amounts requested for other NIH Institutes and Divisions.

The amount requested in the budget for direct construction was increased from \$1.5 to \$3.2 million to provide funds for construction of laboratory facilities for neurology and child health research in Puerto Rico.

The increases, by activity, provide funds for Grants Research, from \$587.8 to \$590.5 million; Grants Training, from \$193.4 to \$195.4 million; and Collaborative Studies, from \$77.5 to \$83.1 million.

Amounts for other activities remain the same, as reported in the February 9 issue of the *NIH Record*.

The first science museum in the United States was founded by the Charleston (S. C.) Library Society in 1773.—Information Please Almanac.

Betty Wiehle, of NHI's Budget Office, Retires



Dr. Ralph E. Knutti, Director of the National Heart Institute, presents a silver watch to Betty Wiehle at a retirement reception given by the NHI staff. Miss Wiehle also received a transistor radio.—Photo by Lou Cook.

It took Betty Wiehle 30 years but she's finally going to the dogs—and she's glad of it.

Miss Wiehle recently retired from the National Heart Institute after three decades of service with the Federal Government. She will now devote much of her energy to her favorite pastime—breeding and showing dogs.

A native Washingtonian, Miss Wiehle has long been a cocker spaniel fancier and has her own hobby kennel. She is also an active member of the Capital City Cocker Club.

She became acquainted with dog breeders when she bought a 6-month-old female to replace a pet that had been run down by a car. This puppy was the granddaughter of one of the outstanding cocker spaniels in the country—Stockdale

Liver Cancer Induced in Monkeys for 1st Time

National Cancer Institute investigators have observed the development of liver cancers in several species of monkeys given N-nitrosodiethylamine (DENA) by oral or intraperitoneal routes.

DENA and related chemicals of the nitrosamine class have been known to cause cancer in rats and hamsters. The present study provides evidence of the ability of DENA to cause liver cancer in monkeys. Previous reports of the induction of cancer in monkeys have been rare.

The cancers were detected in five of 20 monkeys within 13 to 26 months after beginning DENA treatment. Three had received the chemical intermittently in a milk formula for the first six months of life, and subsequently in especially prepared sandwiches.

One Receives Injections

The fourth monkey had received DENA in bi-monthly intraperitoneal injections from six months of age, and the fifth, an adult, had received it in sandwich form.

The five monkeys with cancer included male and female animals, and represented the four species tested—rhesus, cynomolgus, capuchin, and African green monkey.

The results of this study may enhance the usefulness of non-human primates as experimental animals for studies of human cancer.

The study was conducted by Dr. Roger W. O'Gara and Dr. Margaret G. Kelly, of the Laboratory of Chemical Pharmacology, NCI, and was reported at the 56th annual meeting of the American Association for Cancer Research.

Bessie Brown Dies, Was CC Nutrition Dep't Aide

Bessie Brown, 52, a Food Service Worker in the Clinical Center's Nutrition Department, died April 29 in Georgetown University Hospital after several years of failing health.

Mrs. Brown came to NIH as a Kitchen Helper in January 1955, and was eligible for disability retirement at the time of her death. She is survived by a son, Thomas Burgess.

Town Talk.

Betty began her government career in 1935 in the Central Accounts Office of the Treasury Department. In 1940 she transferred to the Public Health Service Dispensary, and in 1943 to the accounting office of the War Relocation Authority. She moved to NIH in 1946 and joined the National Heart Institute in 1953 as a budget examiner.